Title (en)

Apparatus for X-ray absorption fine structure spectroscopy.

Title (de)

Vorrichtung für Röntgenstrahlen-Feinstruktur-Absorptionsspektroskopie.

Title (fr)

Appareil d'examen spectroscopique par l'absorption de la structure fine de rayons X.

Publication

EP 0032108 A2 19810715 (EN)

Application

EP 80810405 A 19801219

Priority

US 10581679 A 19791220

Abstract (en)

Apparatus (10) for obtaining EXAFS data of a material (11). A lens (12) directs a pulse of radiant energy (13) from a laser (14) onto a metal target (15) to produce X-rays (16) of a selected spectrum and intensity at the target (15). A baffle (17) directs X-rays (16) from the target (15) onto a spectral dispersive monochromator (18) which directs the spectrally resolved X-rays (16R) therefrom onto a photographic film 20. A film of material (11) is located in the path (22) of only a portion (16L) of the X-rays (16) throughout a selected spectral band, and the resolved X-rays (16R) directed onto the photographic film (20) form two separate images thereon comprising a reference spectrum (26R) representative of a portion of the X-rays (16U) throughout the selected band that was not affected by the film of material (11) and an absorption spectrum (26A) representative of a portion of the X-rays (16L) throughout the selected band that was modified by transmission through the film of material (11). The laser pulse (13) typically has a width of less than about 10 nanoseconds, and the material (11) may be in a highly transient state.

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CPC (source: EP US)

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